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Reflections on Teaching and Learning

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Editorial board

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Digital Publications Team,
E-Learning Unit

Rozita Nawi
Angeline Lee Ling Sing

Centre for Applied Learning and Multimedia,
Universiti Malaysia Sarawak,
94300 Kota Samarahan
Sarawak.
Tel: 082 671 000
Fax: 082 671 579

Everyone is invited to contribute articles, reviews, events and news on teaching-learning issues. All contributions must be submitted to Centre for Applied Learning and Multimedia(CALM), UNIMAS.

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Contents

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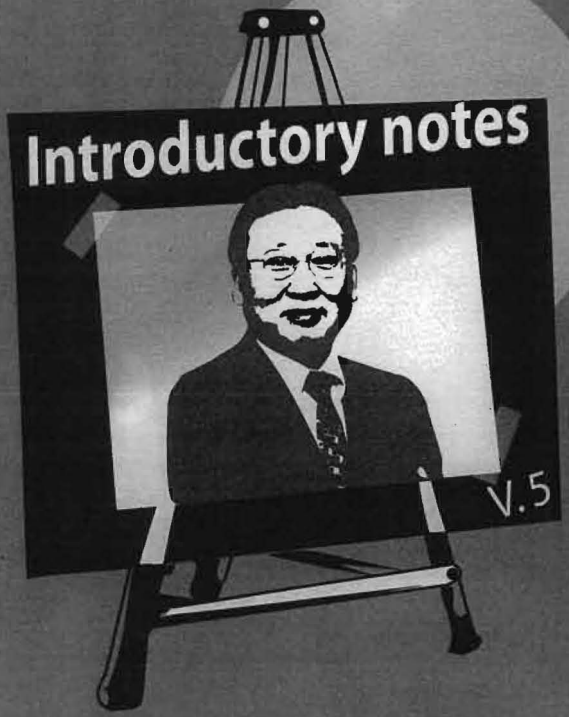
Introductory notes



Greetings from CALM! Many professional development programs had been implemented by CALM last year, and I can say that they have served as a lifelong learning platform for us to relentlessly improve ourselves in various fields that we undertake. CALM will continue to organize many more professional development programs for our academics this year. A core program is the Postgraduate Diploma in Teaching and Learning, which will be offered for the third cohort this coming May.

We, at CALM would also like to take this opportunity to congratulate Prof Abdul Rashid Abdullah on his appointment as our new Vice Chancellor effective by 1st of February 2005. During his tenure as the Deputy Vice Chancellor (Academics) he has contributed a lot of his ideas to realize CALM to be what it is today. We would like to thank him, and wish him all the best in his new job.

In this edition, we would like to share some insights on matters relating to the teaching and learning endeavours in campus. Learning is a noble effort that we should endure throughout our life to seek for new knowledge to develop ourselves. It is important that we continuously upgrade our personal qualities in various aspects, such as, analytical thinking and self-confidence. Nowadays, there are many sources available on the World Wide Web from where we can learn on our own from anywhere and at anytime to gain knowledge in various fields, such as, information technology, biotechnology, education, social sciences and human resources. Knowledge is very important for us to cope up with the challenges in the competitive environment in which we live today. For example, when people talk about advancement in information technology, at least we should know the latest technology gadgets that are available in the market. Our graduates also have to persistently learn to prepare themselves to compete in the job market. Presently, the competition to find a job is very tough, and only a person who has the right quality and ability require by the industry will be successful.

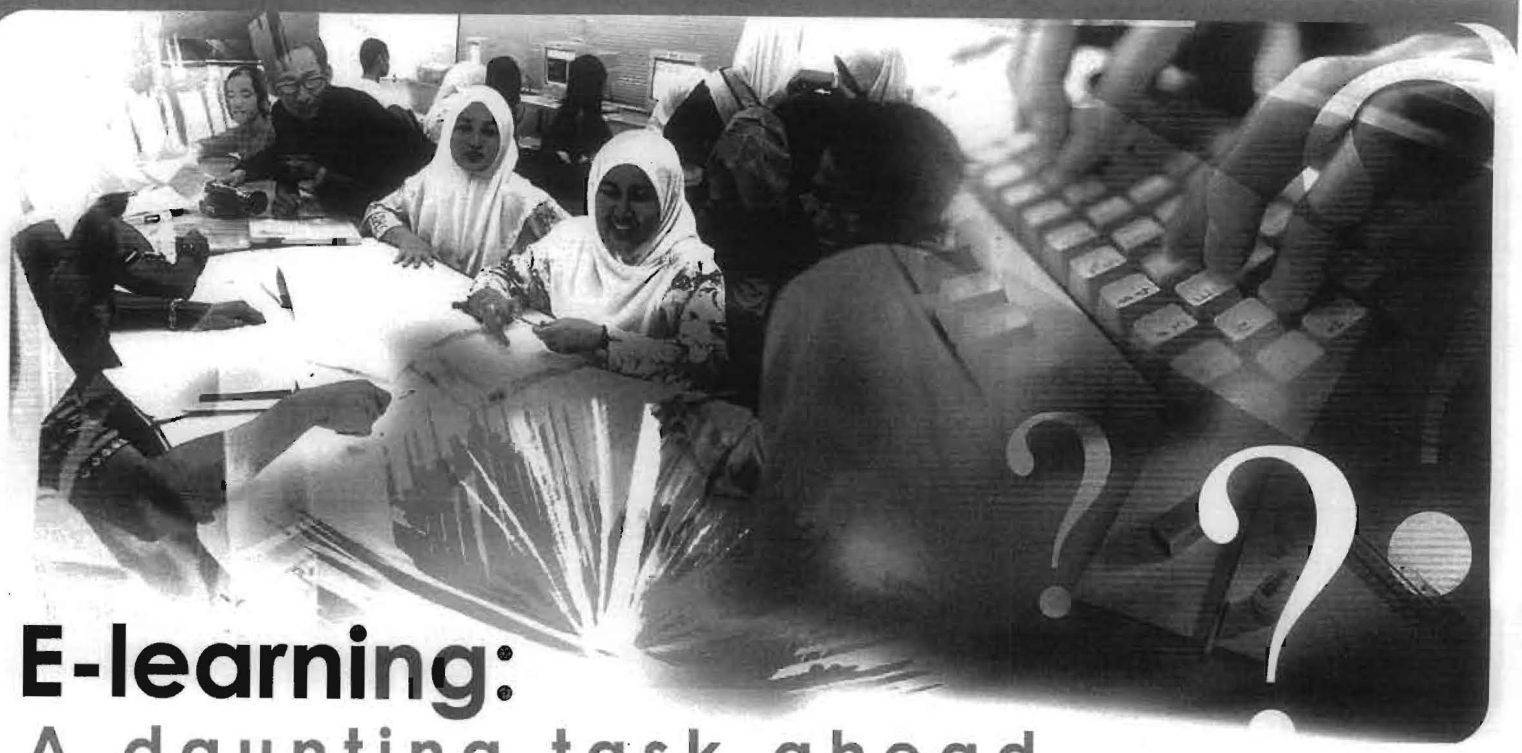
I am also glad that the participants of the second cohort of our Postgraduate Graduate Diploma in Teaching and Learning (PGDTL) have finished all the six taught modules. Now they are taking Module 7: Teaching Practice, and are being assessed by their evaluators. This module gives them an opportunity to practise what they have learned from the other six modules in an actual classroom environment.

Effective 3rd of January 2005, the Penilaian Tahap Kecekapan (PTK) course for the academics was placed under the Staff Development Unit in CALM. Given such responsibility, we at CALM will ensure that many of the qualified academics will participate in our PTK course. We hope to organize two PTK courses this year, with the first one to be offered in early May.

CALM will organize another Academic Quality Assurance Workshop on 26-28 of May 2005 at the Unimas Staff Training Centre, Bau. The target participants are those academics who have not attended any of our previous AQA workshops. The objective is to guide them in assisting their faculties to prepare their quality documents for external auditing, besides updating them on the latest development from the Academic Quality Assurance Division, of the Ministry of Higher Education with regards to AQA.

I hope that in the year 2005, we will continue to work together as a team and to contribute our best effort in developing our human resources to help our university achieves its mission and vision.

Prof Peter Songan
Dean CALM



E-learning:
A daunting task ahead

text • inspiration
Lau Seng | lauseng@ibec.unimas.my

Introduction

The quest for effective and innovative methods of teaching and learning at Unimas has led us to explore the usage of information technology in the early days of Unimas. Gone were the days where calcium carbonate based chalk was used to tickle or amuse our visual sense. We prepared our lectures on acetate-based transparencies and presented to our students with the help of the then sophisticated "overhead projector". Colours and photocopied pictures/figures were commonly used on the transparencies to attract greater attention of our students in the hope to stimulate better understanding on the subject taught. However, through evolution of time, the versatility of the transparencies was soon found to be inadequate for the modern day learning and information explosion due to the advances in information and communication technologies *(ICT)*.

Being the young, forward looking and innovative institution of higher learning, Unimas has been involved in e-learning since 1998. The initial drive to promote e-learning at Unimas was difficult. Many barriers needed to be overcome and the most important element was the fear factor faced by both the lecturer as well as the students. The fear factor may be mainly psychological in nature but it was the main stumbling block in the promotion of e-learning at Unimas. It is fortunate that this fear factor is not as recalcitrant as the saying "old habits die hard". The number of e-learning participants has steadily increased over the years and it has become the norm to have an online course cube for each course offered at Unimas.

Though, we have somewhat conquered the psychological barrier to e-learning, we are faced with other technical as well as pedagogical issues in implementing e-learning effectively. In this article some of these issues are discussed from the perspective of a lecturer conducting chemistry courses on-line.

The Early Boost

The early years of experimenting with course delivery through on-line means had been met with some success and this had provided a boost to lecturers to embark on the e-learning environment at Unimas. The Environmental Chemistry and Spectroscopy courses offered by the Faculty of Resource Science and Technology *(FRST)* were among the early courses conducted on-line. The feedback from students and the lecturer with regards to the effectiveness of course delivery were quite positive. The students found that e-learning provided a better learning environment, less intimidating and enable them to learn more. The lecturer found that the performance of the students were better, there were more interactions, more questions were asked and more responses from the students. The quality of work submitted by students also improved, *(Lau & Mohamad, 2002)*. All these positive feedback coupled with the support from the university management, have encouraged many more lecturers to create their respective course cubes on-line, using the ***Lotus Note, QuickPlace*** platform. The interest has continued to grow over the years and having a course cube on-line has become a norm in all faculties at Unimas now. However, our enthusiasm to embrace the new technology in our teaching-learning activities has overwhelmed the infrastructure that supports this technology. We have exceeded the carrying capacity of our network system in the campus

and the benefits that we enjoyed in the early years through e-learning are in jeopardy.

The Unsustainable Expansion

The number of course cubes based on the Athena and Minerva servers, under the coordination of the **Centre for Applied Learning and Multimedia** *(CALM)* has grown so much that additional servers were put in place. Nowadays, the course cubes of lecturers from FRST are being relocated to the Morpheus server. The general comments from both the students and lecturers on the e-learning at Unimas are that it is getting more difficult to access the course pages during the "peak hours" *(i.e. between 10.00 am and 4.00 pm)*, and the server is often unstable or having technical problems. Indeed, we have reached a state like the Kuala Lumpur traffic during peak hours - massive traffic jams. The difficulty in accessing the course cubes by both the students and lecturers have deterred many users from using them regularly, especially those who access the website through the normal Internet line.

The number of students in a class has also increased many folds. The enrollment for Environmental Chemistry or Spectroscopy courses used to be between 20 and 40 students during the early days of Unimas. However, that number has changed to between 80 and 100 students. The responses from the students who can access or have the patience to access the course cubes are still very encouraging. Sometimes, the responses are overwhelming. Everyday the lecturer is swamped with email messages notification of new entries in the course cube. We have reached a point where the lecturer cannot maintain the course cube the way he or she would like to. The best number of students per course cube would be between 30 and 40. A class with larger number of students would be unsustainable, especially on the part of the lecturer.

The ***Lotus Note QuickPlace*** has many good features to enhance our course delivery and facilitate students learning. However there are a few weaknesses that need to be addressed. The course manager *(lecturer)* is the only person who can create or remove individuals as members in the course cube. It is unfortunate that to remove the whole list of members from the list can only be done one at a time. Imagine you have 50 or 100 student names to be removed at the end of the semester! Similarly, to create new members' list, you need to input them individually. It would be much user friendly if the software allows "cut and paste" or "copy" functions to update the membership list.

The common complaint from students is that they cannot get to a terminal that has Internet access easily in the campus. The number of computer terminals in the campus is not sufficient for all the students to use. However, if the students have their own computers with the wireless access capability, then more students will be inclined to use the course cube if we could provide the wireless access points campus-wide.

The current difficulties in accessing and managing the course cube have, to a certain extent, reduced the preference of lecturers and students to use the course cube more effectively. Currently course cubes are mainly used as a site for depositing lecture notes and class announcements. Effective student-student and student-lecturer interactions are almost non-existence. These interactions are the key to the success of a course cube.

Mitigating Measures

The management team for the ***Lotus Note QuickPlace*** application probably knows what is the optimum capability of the available system and whether the existing system has the mean to support the e-learning needs of the present and future campus. May be the e-learning team could explore other applications which can support or complement the present platform. Feedbacks from users could be of tremendous value to the software vendor. They could improve of the user friendliness of their software. Maybe the Lotus Note QuickPlace programmer could look into the possibility of inputting and removing members with greater ease.

The feasibility of installing wireless access facilities campus-wide as well as the broadband connectivity are

The feasibility of installing wireless access facilities campus-wide as well as the broadband connectivity are major factors that can help in reducing the congestion of the network in the campus

major factors that can help in reducing the congestion of the network in the campus. The Unimas IT committee would be the best venue to address this issue.

The issue of effective usage and maximizing the potential of e-learning does not solely depend on the "hardware or software" of the system. Much depends on the human factor. Preparing course material suitable for e-learning packages is very important. Many of the lecturers are not trained for the e-learning era and as such they need guidance and coaching. Short courses on the pedagogy and material presentation for e-learning would be of great help.

Conclusion

The launching of the course cube using the ***Lotus Notes QuickPlace*** platform was a viable solution. Publishing all our course materials onto the course cube is the first step towards a paperless campus. Besides being economically attractive, the publishing of course material onto the course cube has also *(more importantly)* preserved the features of the material such as its colours, design and interactive nature. These make self-learning by the students more effective.

Reference

Lau, S. and Mohamad, F.S. 2002. Online learning: Is it meant for science courses? Internet and Higher Education 5(2002) 109 - 118

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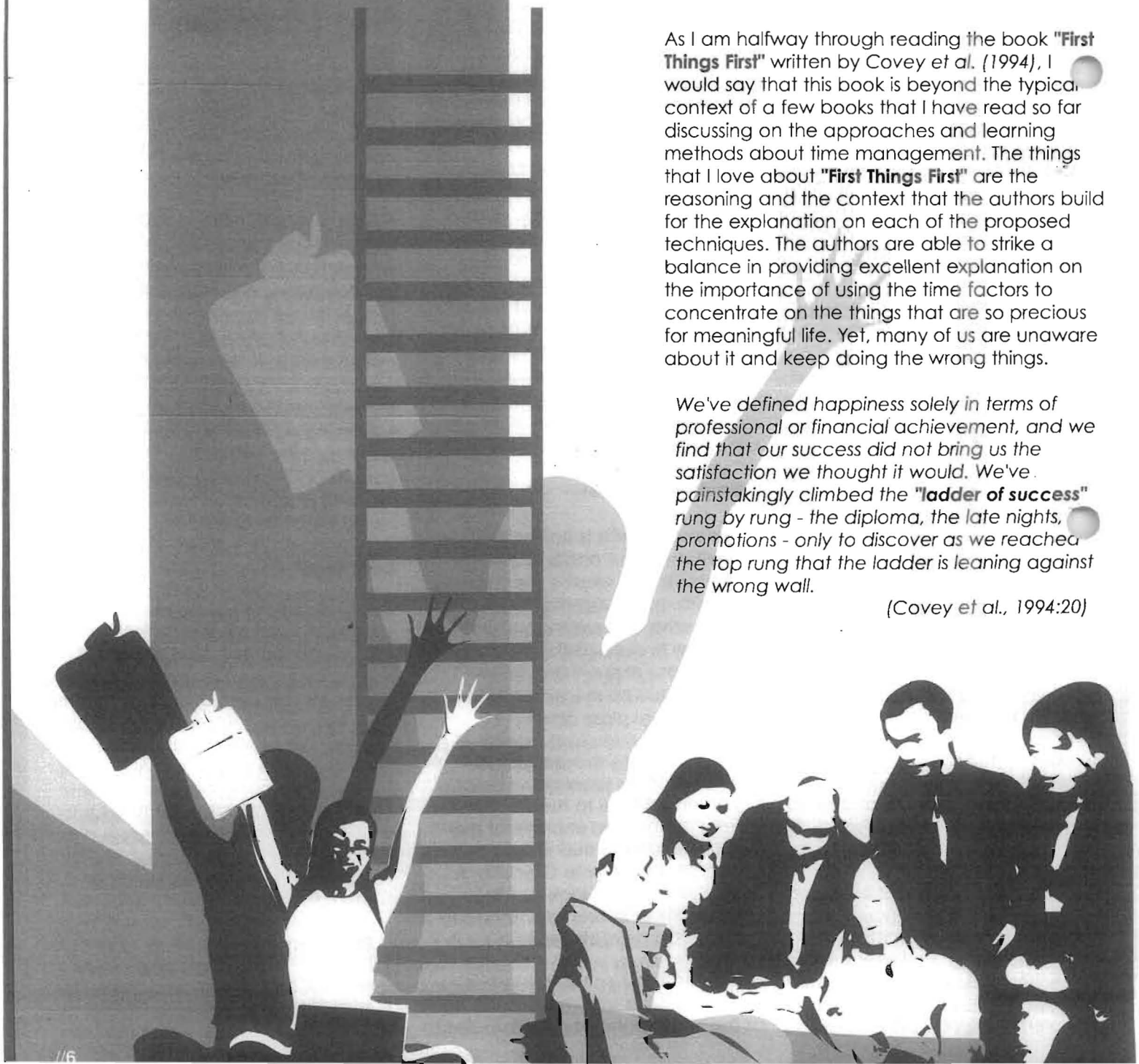
Rohaya Mohd Nor | mnrohaya@feb.unimas.my

First things first: Some Reflection

As I am halfway through reading the book **"First Things First"** written by Covey *et al. (1994)*, I would say that this book is beyond the typical context of a few books that I have read so far discussing on the approaches and learning methods about time management. The things that I love about **"First Things First"** are the reasoning and the context that the authors build for the explanation on each of the proposed techniques. The authors are able to strike a balance in providing excellent explanation on the importance of using the time factors to concentrate on the things that are so precious for meaningful life. Yet, many of us are unaware about it and keep doing the wrong things.

> *We've defined happiness solely in terms of professional or financial achievement, and we find that our success did not bring us the satisfaction we thought it would. We've painstakingly climbed the* ***"ladder of success"*** *rung by rung - the diploma, the late nights, promotions - only to discover as we reached the top rung that the ladder is leaning against the wrong wall.*
>
> *(Covey et al., 1994:20)*



I would like to bring readers into the journey of my own self-reflection as an educator. As I go through reading the book, chapter by chapter, I keep noticing the words "paradigm", "principle" and "integrity". **What is paradigm?** My Cambridge International Dictionary defines paradigm as "a model of something, or a very clear and typical example of something".

Covey *et al. (1994:28)* stated that:

> *The way we see (our paradigm) leads to what we do (our attitudes and behaviors); and what we do leads the results we get in our lives. So, if we want to create significant change in the results, we can't just change attitudes and behaviors, methods or techniques; we have to change the basic paradigms out of which they grow. When we try to change the behavior or the method without changing the paradigm, the paradigm eventually empowers the change.*

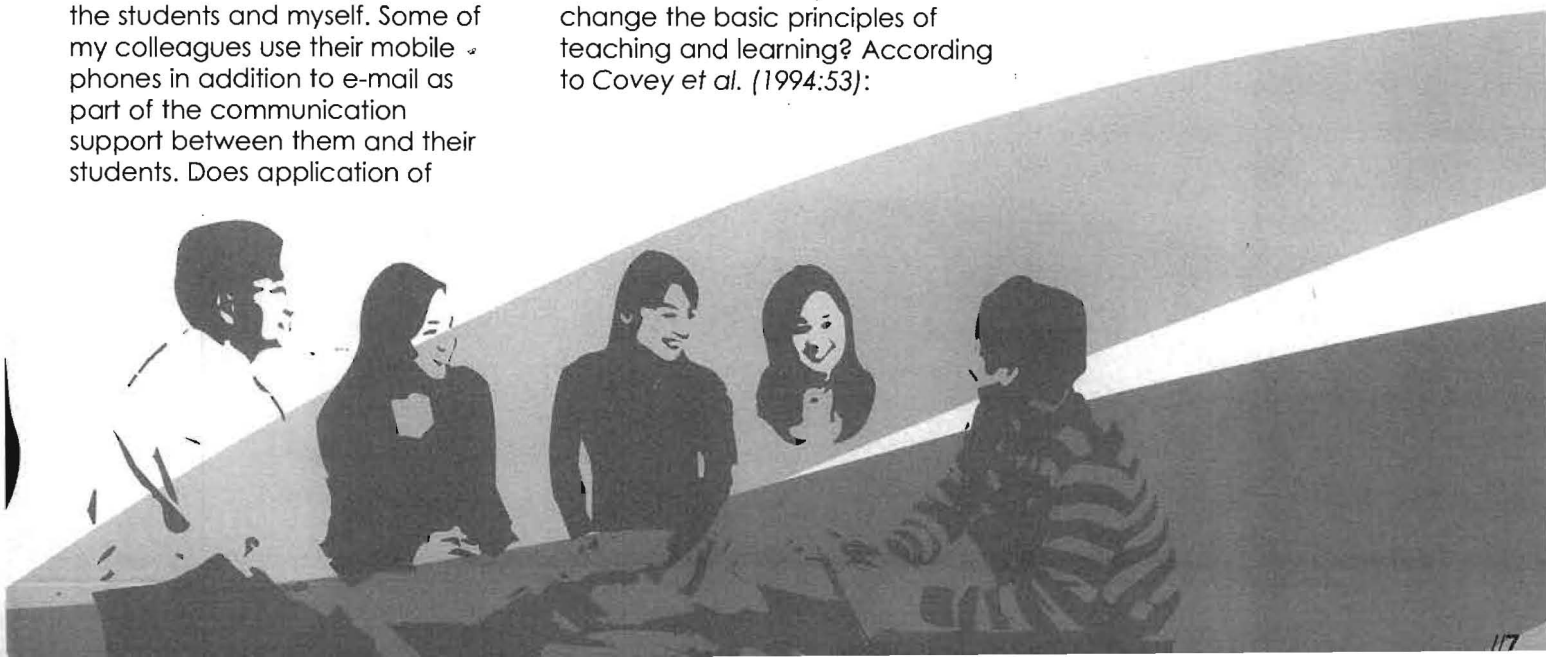
Nowadays, as technology liberates many of us from doing things conventionally, technology also infuses its influence in changing our behavior. In a university environment such as UNIMAS, the use of technology has caused significant changes in the approaches of teaching and learning. The usage of e-learning tools for instance, has been an integral part of teaching a particular course. I utilize the e-learning tool as part of knowledge and information sharing between the students and myself. Some of my colleagues use their mobile phones in addition to e-mail as part of the communication support between them and their students. Does application of technology such as the integrating of e-learning tools in the process of teaching and learning signify embracing of the new paradigm of teaching and learning?

The way we see (our paradigm) leads to what we do (our attitudes and behaviors); and what we do leads the results we get in our lives

The North Central Regional Educational Laboratory *(www.ncrel.org)* mentioned that, many current researchers are focusing on the new assumptions of looking at learning that promote "engaged, meaningful, learning and collaboration involving challenging and real life tasks; and technology as a tool for learning, communication and collaboration". Obviously, the assumptions are built upon the acceptance that technology is an enabler towards promoting and assisting the kind of meaningful learning that can depict and be applied in the real life situations. At the same time, communication and collaboration activities, as many current literatures have acknowledged serve as an important characteristic of surviving in today's globalize world. Do these new assumptions change the basic principles of teaching and learning? According to *Covey et al. (1994:53)*:

> *The power of principles is that they're universal, timeless truths. If we understand and live our lives based on principles, we can quickly adapt; we can apply them anywhere. By teaching our children principles instead of practices, or teaching them the principles behind the practice, we better prepare them to handle the unknown challenges of the future. To understand the application may be to meet the challenge of the moment, but to understand the principle is to meet the challenge of the moment more effectively and to be empowered to meet a thousand challenges of the future as well.*

From my point of view, these new assumptions do not change the basic principles of teaching and learning at the tertiary level. But, the new assumptions do strongly hold that technology has to be part of the process of teaching and learning. Further, as an educator, I always believe that one of the key aspects embedded in the basic principles of teaching and learning, is to always exercise integrity in all the things that we do. Some part of the interesting reading that I get from *Covey et al. (1994)* is the idea of exercising integrity in the moment of choice. ***"A moment of choice is a moment of truth"*** *Covey et al. (1994:169)*. We will demonstrate our character and competence when we face the moment of choice. *Covey et al. (1994)* suggest the following factors may be acting on us in the moment of choice: urgency



(things that pressing and proximate); the social mirror *(things that are pleasing and popular)*; our own expectation; the expectations of others; our deep values *(what we feel is important in the long run)*; our operational values *(what we want in the short run)*; our scripting; our self-awareness; our conscience; our fundamental needs; and our wants. Further, *Covey et al. (1994)* argue that the principle-centered living is the best practice that guides us to deal with the moment of choice. Characteristics of principle-centered people according to *Covey et al. (1994)* as follows:

- They are more flexible and spontaneous
- They have richer, more rewarding relationships with other people
- They are more synergistic
- They are continually learning
- They become more contribution-focused
- They produce extraordinary results
- They develop a healthy psychological immune system
- The cultivate a rich inner life
- They create their own limits
- They lead more balanced life
- They become more confident and secure
- They are better able to walk their talk
- They focus on their circle of influence (instead of their circle of concern)
- They radiate positive energy
- They enjoy life more

Thus, from the point of view of a young educator such as myself, learning to exercise integrity on all the things that I do and involve will keep me on the right path while I am progressing along the journey of my career in the academic field.

I also like to share some practical views from **"First Things First"** about achieving quality life. *Covey et al. (1994)* argued that part of the reasons of why many cannot find happiness although they have succeeded in securing wealth and power is because of how we spend our times. Too much time have been spent on urgent activities such as crises, pressing problems, deadline driven projects, meetings and preparations that can contribute to stress, burnout and deeper crises. *Covey et al. (1994)* called these urgent activities as things that are urgent and important. Most of the times, the urgency is caused by procrastination, not enough prevention or planning. They further argued that the times spent on the urgency activities can be reduced if we concentrate more times on the quality activities such as preparation, prevention, values clarification, planning, relationship building, true re-creation and empowerment. These are the activities that are not urgent and important, and demand us to act on it *(proactive)*, instead of react on it *(reactive)*. Spending more times in these activities will help to reduce time dealing with urgency things. *Covey et al. (1994)* also mentioned that there are things that are urgent but not important such as phone call interruptions, meetings or other popular activities. These kinds of activity lead to the illusion of importance. We spend a lot of time and attempts to meet other people's expectations and priorities. The last kind of activities that many are trapped in is the **"deterioration"** activities. The one that is not urgent and not important such as time wasters. Concentrating more time on the quality activities will contribute to better direction for the future. Quality activities emphasize towards the fulfillment of the four human needs and capacities, **"to live, to love, to learn, and to leave a legacy"** *(Covey et al., 1994)*.

I hope this article does bring readers something to think and to reflect on. **"First Things First"** written by *Covey et al. (1994)* is worth to read.

References

1. *Cambridge International Dictionary of English. UK: Cambridge University Press.*

2. *Covey, S. R., Merrill, A.R., and Merrill, R.R. (1994). First Things First. New York, USA: Simon & Schuster.*

3. *North Central Regional Educational Laboratory. New Times Demand New Ways of Learning. Retrieved 26th Feb, 2005, from http://www.ncrel.org/sdrs/edtalk/wtimes.htm*

Bioinformatics: A Revolutionisation in Biological Sciences

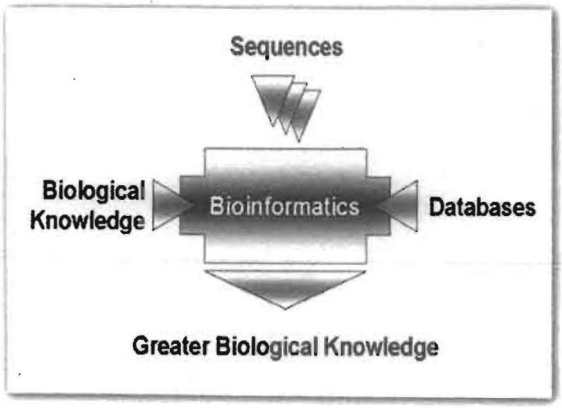
text • Inspiration
Awg Ahmad Sallehin Awg Husaini | haahmad@frst.unimas.my

Introduction to Bioinformatics

In the era of the genomic and proteomic these days, advancement in the technology development has created a massive compilation in the amount of biological information available. This is due to huge leap and advances in the fields of molecular biology and genomic high throughput technology. Due to the massive explosion in the number of biological data generated and gathered, scientist have to come up with a quick and fast solution on how to managed, organized and analysed the abundant bulk of biological data and information. Here is where bioinformatics started to evolve and establish itself into a full-fledged multidisciplinary subject that integrates developments in information and computer technology *(ICT)* as applied to biotechnology and biological sciences. Thus computers are chosen as tools to solve the problem in managing, organizing and analysing the data. Bioinformatics uses computer software tools for database creation, data management, data warehousing, data mining and global communication networking made available for the scientific research community.

Bioinformatics is the application of computer technology to the management and analysis of biological data. The conclusion to the huge amount of biological data is that computers are being used to gather, store, analyse and merge biological data. It is an interdisciplinary research area that acts as an interface between the biological and computational sciences. In other words, bioinformatics is the recording, annotation, storage, analysis and searching/retrieval of nucleic acid sequence *(gene and*

RNAs), protein sequence and structural information. This also includes databases of sequences and structural information as well as methods to access, search, visualize and retrieve the biological sciences information. The ultimate ***goal*** of **bioinformatics** is to uncover the wealth of biological information hidden in the mass pool of data and to obtain a clearer insight into the fundamental biology of organism. This new knowledge and information could have significant impacts on fields as varied as human health, agriculture, the environment, energy and biotechnology.



The Importance of Bioinformatics

The greatest hurdle facing the molecular biology scientists these days is to interpret and make sense of the wealth of data that has been generated by the genome sequencing projects. Conventionally, molecular biology research experiments was performed entirely at the laboratory bench but the huge increase in the scale of data being produced and generated with the advancement in the genomic era has seen the need to incorporate computers into this research process.

For example, sequence generation and its subsequent storage; interpretation and analysis are all entirely computer dependant tasks. However, the molecular biology of an organism is a very complex issue with research being carried out at different levels of biological sciences including the genome, proteome, transcriptome and metabolome levels. Following on from the huge explosion in volume of genomic data, similar increase in data have been observed in the fields of proteomics, transcriptomic and metabolomics.

The challenge facing the bioinformatics experts today is the intelligent and efficient storage of this mass pool of biological data. It is then their responsibility to provide easy and reliable access to this data. The data itself is meaningless before analysis and the total volume present makes it impossible for even a trained and expert biologist to actually begin to interpret it manually. Therefore, sophisticated and advanced computer tools must be developed to allow the extraction of meaningful biological information.

There are three main biological processes around which bioinformatics tools must be developed: -

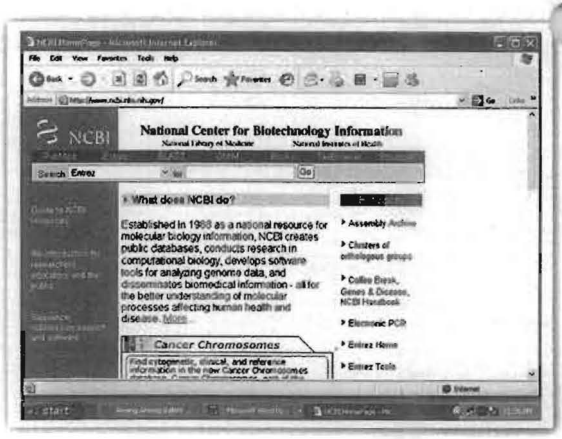
- DNA sequence that determines the protein sequence
- Protein sequence that determines the protein structure
- Protein structure that determines the protein function

The integration of information obtained and learned on this particular key biological processes would allow us to achieve the long-term goal of the complete understanding of the biology of the organisms.

Biological Databases

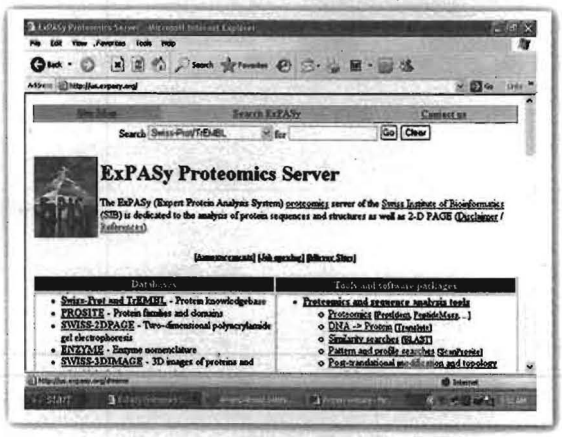
Biological databases are archives of consistent data that are stored in a uniform and efficient manner. These databases contain data from a broad spectrum of molecular biology areas. There are two types of biological databases namely, primary and secondary databases. Primary or archived databases contain information and annotation of DNA and protein sequences, DNA and protein structures and DNA and protein expression profiles.

Secondary or derived databases are so called because they contain the results of analysis on the primary resources including information on sequence patterns or motifs, variants and mutations and evolutionary relationships. Information from the literature is contained in bibliographic databases, such as MedLine.

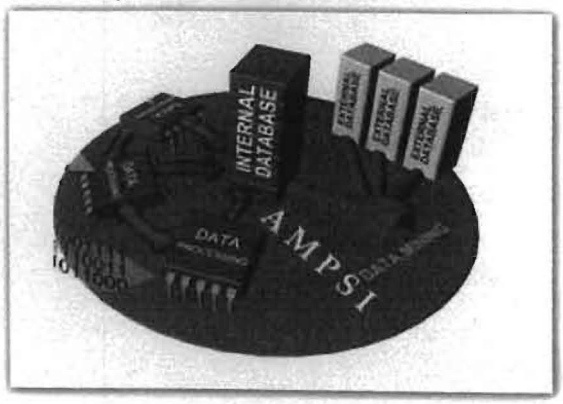


It is crucial and essential that these databases are easily accessible and that a comprehensive and user-friendly query system is provided to allow researcher to obtain very specific information on a particular biological subject. The data should be provided in a clear, consistent manner with some visualisation tools to aid the biological interpretation. Specialist

databases for particular subjects have been set-up, developed and made available online *for example* European Molecular Biology Laboratory *(EMBL)* database for nucleotide sequence data, UniProt/Swiss-Prot protein database and Protein Database *(PDB)* a 3D protein structure database to name a few and many others.



Scientists also need to be able to integrate the information obtained from the underlying heterogeneous databases in a sensible and clear manner in order to be able to get a clear overview of their biological subject. SRS or Sequence Retrieval System is a powerful, querying tool provided by the European Bioinformatic Institute *(EBI)* that links information from more than 150 heterogeneous resources.



Biological Application

Once all of the biological data is stored consistently and is easily accessible to the scientific community, the requirement is then to provide methods for extracting the meaningful information from the mass of data. Bioinformatics tools are software programs that are designed specifically to carry out this critical analysis step.

Factor that must be taken into consideration when designing these tools are:

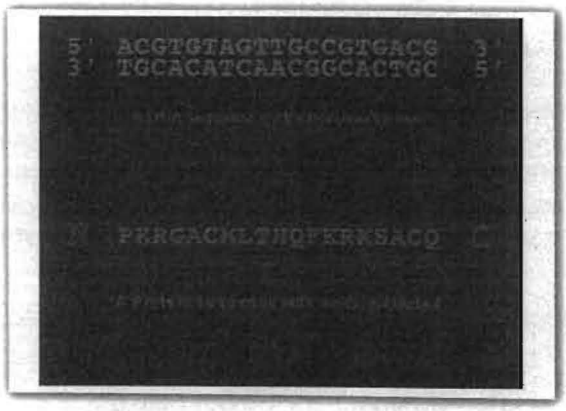
- The end user *(the biologist)* may not be a frequent user of computer technology
- These software tools must be made available over the internet given the global distribution of the scientific research community

The EBI provides a wide range of biological data analysis tools that fall into the following four major categories:

- Homology and Similarity Tools
- Protein Function Analysis
- Structural Analysis
- Sequence Analysis

Homology and Similarity Tools

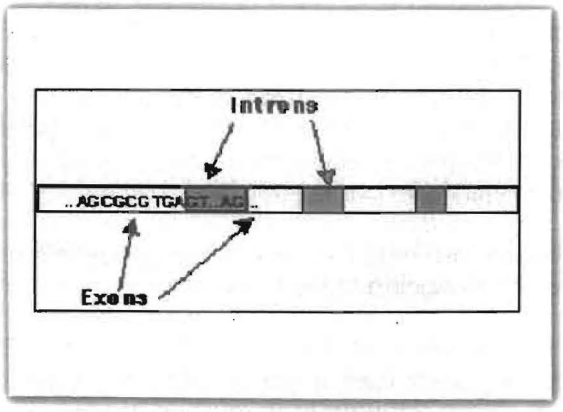
Homologous sequences are sequences that are related by divergence from a common ancestor. Thus the degree of similarity between the two sequences can be measured while their homology is a case of being either true or false. This set of tools can be used to identify similarities between novel query sequences of unknown structure and function and database sequences whose structure and function have been elucidated.



Protein Function Analysis

This group of programs allow us to compare our protein sequence to the secondary *(or derived)* protein databases that contain information on motifs, signatures and protein domains. Highly significant hits against these different pattern

databases allow us to approximate the biochemical function of our query protein.

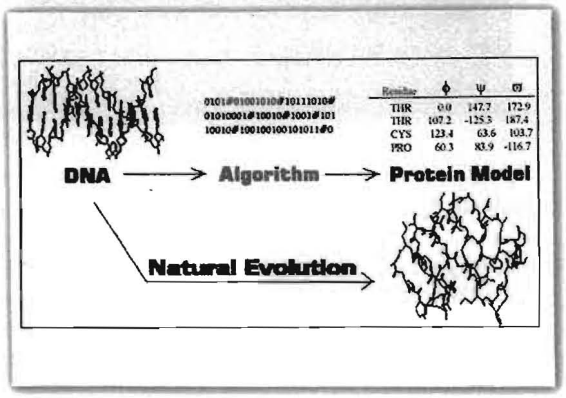


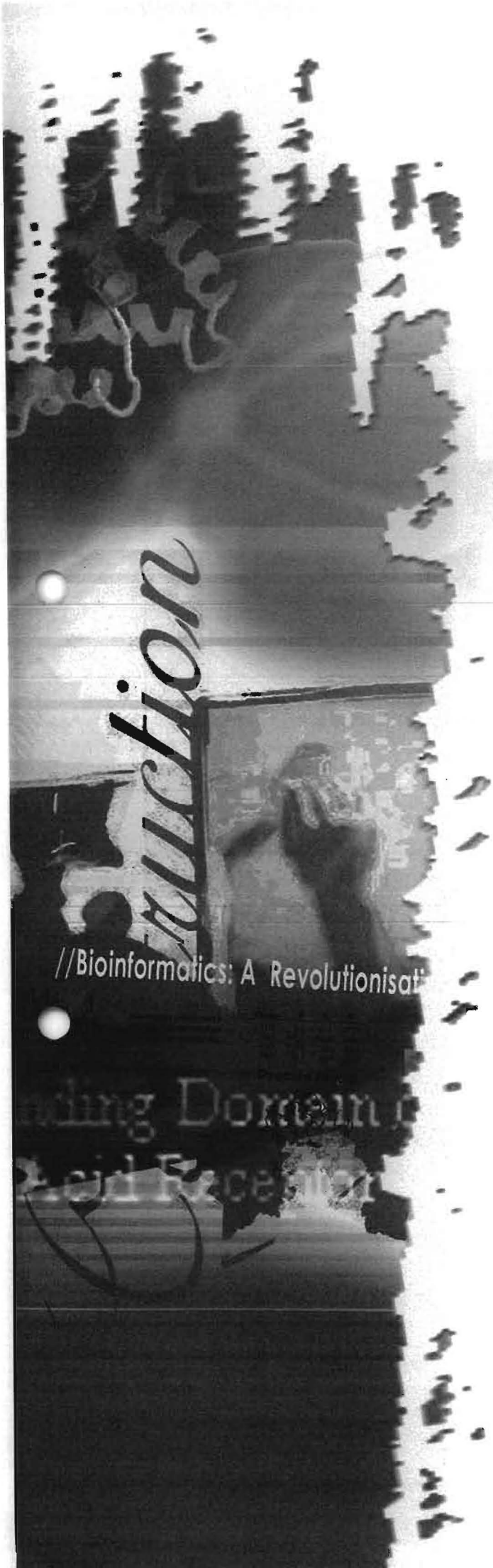
Structural Analysis

These sets of tools allow us to compare structures with the known structure databases. The function of a protein is more directly a consequence of its structure rather than its sequence with structural homolog tending to share functions. The determination of a proteins 2D/3D structure is crucial in the study of its function.

Sequence Analysis

These sets of tools allow us to carry out further, more detailed analysis on our query sequence including evolutionary analysis, identification of mutations, hydropath regions, CpG islands and compositional biases. The identification of these





and other biological properties are all clues that aid the search to elucidate the specific function of our sequence.

Potential and Future of Bioinformatics

The potential of bioinformatics in the identification of useful genes leading to the development of new gene products, drug discovery and drug development has led to a paradigm shift in biology and biotechnology of these fields are becoming more & more computationally intensive. The new paradigm, now emerging, is that all the genes will be known "in the sense of being resident in database made available electronically", and the starting point of biological investigation will be theoretical and a scientist will begin with a theoretical approaches and only then turning to experiment to follow or test the hypothesis.

With a much deeper understanding of the biological processes at the molecular level, the bioinformatics scientist have developed new techniques to analyse genes on an industrial scale resulting in a new area of science known as 'Genomics'. The shift from gene biology has resulted in the development of strategies from laboratory techniques to computer programmes to analyse whole batch of genes at once. Genomics is revolutionising drug development, gene therapy, and our entire approach to health care and human medicine.

The genomic and proteomic discoveries are getting translated in to practical biomedical results through bioinformatics applications. Work on proteomics and genomics will continue using highly sophisticated software tools and data networks that can carry multimedia databases. Thus, the research will be in the development of multimedia databases in various areas of life sciences and biotechnology. There will be an urgent need for development of new and advanced software tools for data mining, analysis and modelling, and downstream processing. Security of data, data transfer and data compression, auto checks on data accuracy and correctness will also be major concern in the research area of bioinformatics. The use of virtual reality in drug design, metabolic pathway design, and unicellular organism design, will no doubt paving the way to design and modification of muticellular organisms, will be the pressing challenges, which are the challenges, that bioinformatics scientist and specialist have to tackle. It has now been universally recognized that bioinformatics is the key to the new grand data-intensive in the field molecular biology.

text • inspiration
Johari Abdullah | *ajohari@fit.unimas.my*

Personal Reflection on the Postgraduate Diploma in Teaching and Learning

I never thought of taking any formal training on teaching when I first joined **UNIMAS** a few years back as a tutor. After all, lecturing is not that difficult isn't it? I saw my lecturers done it when I was a student, and it was quite straight forward. You go to the lecture hall, scribble something on the board or transparencies *(at that time there was no multimedia projector)*, mumble something incoherent and when students ask something, just tell them to read the text book. Therefore, I assumed it will be the same story when I become a lecturer.

When I came back from further study at the master's level, and received the so called *"invitation"* to join **Postgraduate Diploma in Teaching and Learning** *(PDGTL)*, I was thinking of all the wasted time that I need to spend for the training. The precious time could be used to prepare lecture materials, and to do some research. Back then the invitation was something that I dread, and something I cannot refuse since it become part of the requirements for job confirmation. There was no escape route and I felt trapped.

So, with much aversion, I joined the first module, and then continued to the next module and so on. Along the way, I started to change my view towards **PDGTL**. It was not something that happened in a blink of eyes, but rather a slow realization of what the whole training was all about. We started to learn about teaching pedagogy, instructional design, management of teaching and learning and so on. What I realized was that teaching is not easy *(if you want to be a good "academic" lecturer)* since it requires multitude of skills and knowledge which can only be obtained through formal training. We are expert in our own area of expertise but it does not mean that we are capable of transferring the knowledge to our students.

The training itself goes beyond memorizing theories. It is an eye opener what teaching and learning is all about in an academic institution. I thought I had been an "OK" lecturer previously, and I thought the reason students doze off in my lectures was because the topics were quite difficult. Now I know why. Different students have different learning style, an

we have to apply different teaching pedagogy to cater for this.

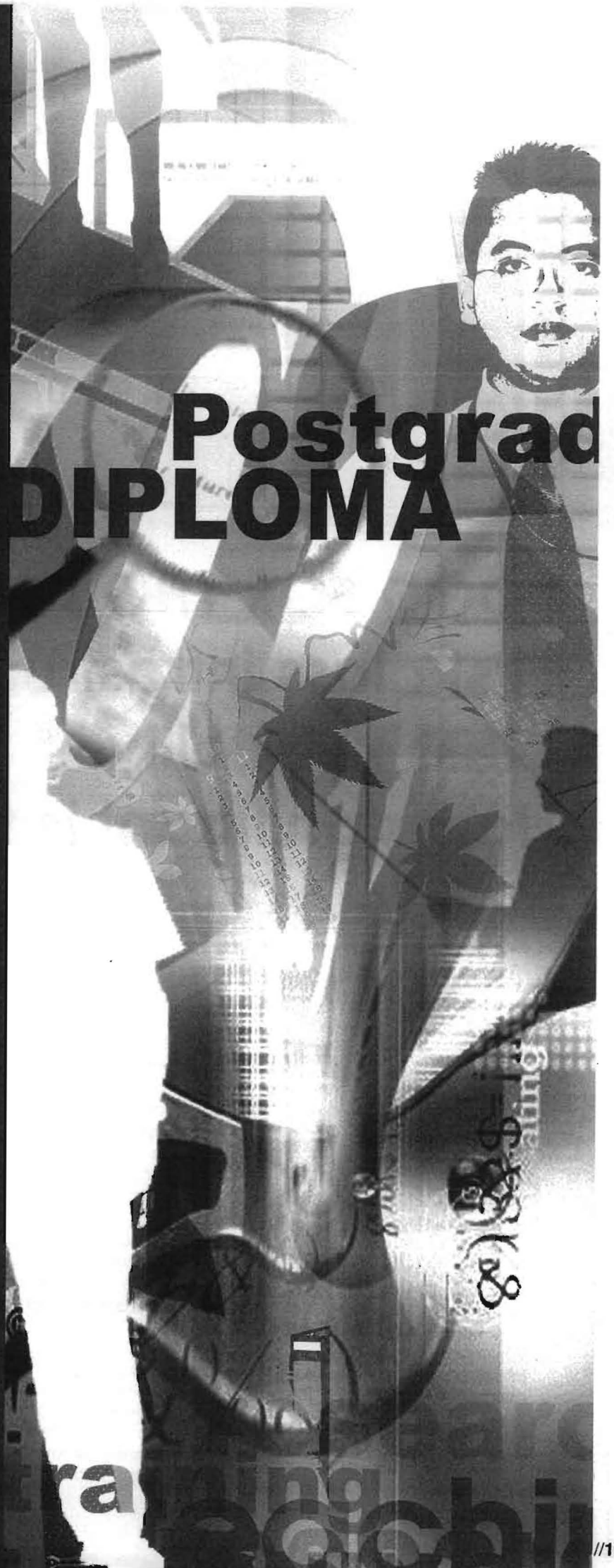
Even though the training was successful, there are some areas which can be improved:

1. **Training schedule and duration**: The schedule is something that needs a good planning and consideration. Previously the first **PDTL** training was delivered in a compact mode where all **6 modules** were conducted in a few continuous weeks. The second time **PDTL** was conducted *(where I was Involved)*, the modules were conducted separately over a period of one year. The problem is, it is very hard for the lecturers *(that have to join)* to plan their schedule, resulting in a very hectic schedule for the lecturers. The training schedule should be fixed and made available to prospective lecturers in advance. I know it is not easy to do that since the training make extensive use of "flying" expert instructors where they have their own schedule.

2. **Post training**: Do I make use of the knowledge after the training? How does the management make sure that the knowledge obtain is fully utilized in teaching and learning? One method is through continuous support from **CALM**. We should have a **web portal** that contains all the support material that can be used in our teaching and learning based on the training. *For example*, sample learning outcome, discussion forum to discuss current practice and so on.

3. **Research**: Apart from FCSHD, why would other faculties like to do research on teaching and learning? The fact is that there are lots of research potential on instructional design and teaching/learning pedagogy in our own area of expertise. *For example*, I can actually combine problem based learning pedagogy with first programming language course and see the effect of it. Therefore, the university should encourage and support lecturers who want to do research in this area by providing research funding.

As a conclusion, **PDGTL** has been an "eye opener" experience for me. The knowledge that I gained from the training is very useful in helping me prepare better teaching materials. It also helps making me a better lecturer. For lecturers who will join the next batch of **PDGTL**, look at the bright side and join the training with positive mind. The time and energy that you will sacrifice will be worth it.



text • inspiration
Rusli b Ahmad | *arusli@fcs.unimas.my*

FOOD FOR THOUGHT
First class infrastructure, third class mentality. How significant is this to us in Unimas?

Too many questions came to my mind when I tried to explore this issue. Brainstorming activities cannot give answers to this question but it only creates more questions and feelings of anxiety. These are several unanswered questions that came across my mind;

- **First class infrastructure, third class mentality, what does it mean?**
- **Why does it happen?**
- **Why first class in infrastructure?**
- **Why third class mentality?**
- **Why not first class infrastructure and first class mentality?**
- **Why not third class infrastructure and yet first class mentality?**
- **Can we succeed if we proceed with this attitude?**

How can we in Unimas be involved with the discussion on this specific matter? Is it significant to us? First, as citizen of Malaysia we need to think seriously about this phrase or statement. As a higher institution of learning we need to think about this. This relates to our core business, that is, to become a leading institution of knowledge development through teaching and learning activities and research. This also exactly suits our motto: "Contemporary and forward looking". This is also in line with Unimas vision to become as an exemplary university of internationally acknowledged stature and as a scholarly institution of preference and choice by students and academician through the pursuit of excellence in teaching, research and scholarship. This vision can be implemented through Unimas mission, offering a range of opportunities in education, training and scholarly services, and through strategic and innovative application of the knowledge to enhance the quality of the nation's cultures and the prosperity of its people.

Why is the phrase very important and touching to our heart? Although these words or statement come from political figures of our country, it has an important implication on us. It is definitely relevant for discussion at our level: in Unimas. Without denying it, we need to respond

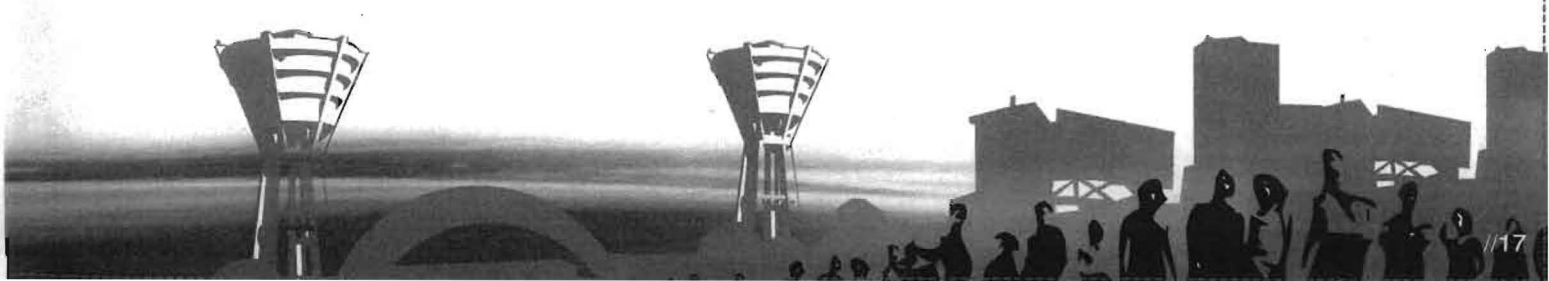
and react very fast to this saying or statement. This saying shows how our government wants to strengthen the quality of our people. To make Malaysia a developed nation *(in what ever time frame)* we need to equip our human capital with whatever competencies that are required. Now-a-days, not only human capital is needed. We also need to think of how to equip our citizens with the power of mind or the brainpower. Human capital is vital compared to financial and physical capital but still it is not sufficient if we only have third class mind power. Third class mind can only prepare third class citizens in term of their ability to think, to create changes, to be self-resilient and to face challenges in the future. However, with first class mentality we want to have Malaysians with good mental capabilities, constructive ways of thinking, positive frames of mind, a maximum utilization of the brain power *(may be also power of love)*, analytical, contemporarily and forward looking, having clear state of mind, and good attitudes.

To make *Malaysia* a developed nation (in what ever time frame) we need to equip our human capital with whatever competencies required by the nation

How about us in Unimas? Do we also produce third class graduates? What about their mind sets? Are they also third class products? If yes, how are we going to say no to this? There is no short answer to this and no ready made recipe that we can use. So, how are we going to achieve it? Can this learning organization help us to see the light at the end of the tunnel and will we have a brighter future for Unimas. If we say yes to it we need to equip Unimas with all the characteristics of a learning organization.

According to Marquardt (1996), the learning organization is an institution that learns powerfully, collectively and continually transforming it to better manage and use knowledge for corporate success, empowering people within and outside the organization to learn as they work and to utilize technology to maximize maximum learning and production. The leaders must alter the environment to support and encourage learning, link learning to business operations, and communicate the importance of learning organization, demonstrate their commitment to learning, transform organizational culture to one of continuous learning and improvement, encourage employee involvement and embrace continuous, adaptive, improvement-oriented learning approaches throughout the organization. How are we going to do that? Is it sufficient if the Vice Chancellor alone, or University Board of Directors, or Senate members are left to think and translate this in the implementation mechanism? Of course, a leader alone cannot make it happen. Support from the bottom of the hearts should also come from various parties. All entities in Unimas should uplift their spirit; energize their soul and put in efforts for the future of this organization. Everyone in Unimas needs to work and think hard of how we can perform and carry out these roles and responsibilities. Citizens of Unimas need to think of how to improve the approaches needed for the success of our organization.

We need to start a good tradition for Unimas and the core value behind it



should be "quality and excellence". These two words must be the ultimate target for us to achieve. This is the best time to build this tradition since we are to move to the new campus. We need to mold our new campus with good environment for thinking, promotion of the culture of excellence, reformation, portrayal of towering human potentials. In the cornerstone of success, there are three aspects to consider. They are utilizing of intangible assets, practicing knowledge management and the enhancing strategic capabilities (MacNamara, 2003). Intangible assets include:

- Human capital- leadership, ingenuity, problem solving
- Structural capital- Organisational systems, databases, inventions
- Customer capital- Strength of relationship with members, clients, and
- Social capital- Relationship and respect from community, government, industry

Our new campus will have both assets: tangible and intangible. We will have first class infrastructure *(maybe in 5 years time)* but how do we ensure that we will have intangible assets and also a first class entity? We do not have first class scholars? We do not get first class students like students at Harvard, Oxford or even Cambridge. But we have the same assets: the brain. We need to think of how to use the brain wisely and in line with what is proposed by our system of belief. May be we need a proper brain training programme and activities. Whatever platform we take we must be thinking of creating this type of activities.

Brain training is an important part of teaching and learning activities in an environment like Unimas. Brain training includes enhancing creativity, innovation, problem solving and practical ways of thinking. Brain training is important for any organisation to ensure the employees are emotionally stable. Our brain can assist us in creating a more conducive learning environment. Our spirit and wisdom must

Learning organization is an institution that learns powerfully, collectively and continually transforming it to better manage and use knowledge for corporate success, empowering people within and outside the organization to learn as they work and to utilize technology to *maximize maximum* learning and production

be blended together with the brain to transform ourselves into first class rather than a third or second class scholars?

As a conclusion, to have a first class physical set up is not impossible. Corporate entity with their financial capital can easily have their own corporate university but can they ensure first class mentality to exist. It is a must for a young university like Unimas to have a good tradition in academia. It is hoped that through proper guidance, coaching and approaches, Unimas citizen will achieve its vision and mission. Everyone in Unimas must play his or her role to ensure that our ultimate goal becomes a reality. Through whatever means, quality and excellence is essential. The hierarchy of the thinking process *(automatic mind, subconscious mind,*

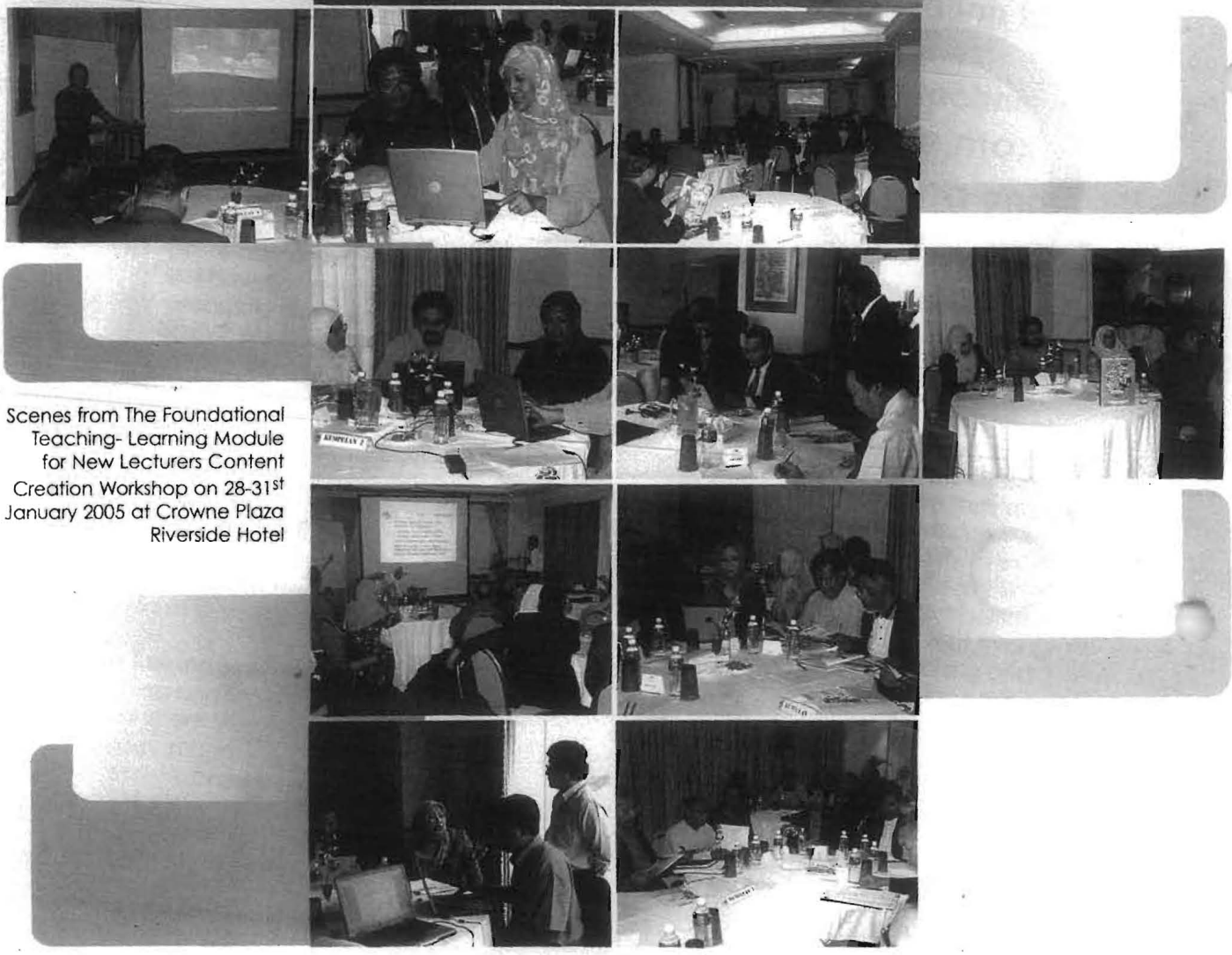
practical mind, creative mind, spiritual mind) must be blended together with the flora and fauna of the pristine environment in Unimas.

References

1. Marquardt, M.J. (1996). Building the learning organization. New York: McGraw- Hill.

2. MacNamara, D. (2003). 'The Cross-Training Solution'. Executive Update Feature Article. Retrieved Jan. 2005. from http://www.centeronline.org/knowledge

The chairman for The Foundational Teaching-Learning Module for New Lecturers Content Creation Workshop: Deputy Vice Chancellor (A) UPSI, YBhg Prof. Dr Khadijah Rohani Bt Mohd Yunus



Scenes from The Foundational Teaching- Learning Module for New Lecturers Content Creation Workshop on 28-31st January 2005 at Crowne Plaza Riverside Hotel

UPCOMING EVENTS (CALM)

- Postgraduate Diploma in Teaching Learning
  4th May 2005
- AQA Workshop
  26th - 28th May 2005